MULTIMEDIA UNIVERSITY

STUDENT ID NO

Table No: _____

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2017/2018

TIS 2351 – HUMAN-COMPUTER INTERACTION

(All sections / Groups)

28 October 2017
02:30 p.m. – 04:30 p.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of 8 pages with 4 Sections only.

2. Attempt **ALL** questions in **SECTION A, SECTION B, SECTION C** and **SECTION D**. The distribution of the marks for each question is given.

3. Please write all your answers in the answer box associated with each question in this question paper.

Section A: Answer all questions.

Fill in the blanks with ONE/TWO words that best describes the application of human-computer interaction concepts as a whole.

(10 marks)

In Human Computer Interaction, evaluation is important because it is integral to the design process. Evaluation focuses on both the Q1) _____ (e.g. how easy it is to learn and to use) and on the Q2) _____when interacting with it (e.g. how satisfying and enjoyable the interaction is). There are 4 aspects to understand before conducting evaluation, i.e. why, what, where and Q3) _____ to evaluate. Evaluation can be classified into 3 broad categories. Firstly, a controlled setting involving user. In this category, the main methods are usability testing and Q4) _____. Secondly, a natural setting involving user. In this category, the main method used is Q5) _____. Finally, any setting not involving users is an evaluation that requires Q6) _____ critiques. Q7) _____ methods are commonly employed to predict user behavior in which the system will be used. For example, Q8) _____ involves applying knowledge of typical users guided by rules of thumb. Another example is Q9) _____ that involves checking how users progress from step to step in user's interactions. Finally, a model such as Q10) _____ is used to predict time it takes to reach a target using a pointing device.

Answer	
Q1)	(one word)
Q2)	(two words)
Q3)	(one word)
Q4)	(one word)
Q5)	(two words)
Q6)	(one word)
Q7)	(one word)
Q8)	(two words)
Q9)	(two words)
Q10)	(two words)

Continued...

Section B: Answer all questions.

Identify the choice that best completes the statement or answers the question.

(10 marks)

Answer

1) The following are examples of applying constraints in design EXCEPT
   A. Deactivate certain menu options by shading them gray.
   B. Flow chart diagrams show which objects are related to which.
   C. The external slots in a computer have been designed to only allow a cable to be inserted in a certain way.
   D. The voice mail system made the presence and number of waiting messages highly visible.

2) What type of interaction would be appropriate to use at the interface so that autistic children can communicate and express themselves better?
   A. Conversing.
   B. Exploring.
   C. Speech interfaces.
   D. Conversing and instructing.

3) The following are examples of external cognition approach EXCEPT
   A. Sounds should be audible and distinguishable so users understand what they represent.
   B. Provides external representations at an interface that reduce memory load.
   C. Involves modifying external representations.
   D. Facilitates computational offloading.

4) Which of the following is a cognitive framework?
   A. Scenario.
   B. Mental model.
   C. Technology as experience framework.
   D. Pilot study.

5) The following are levels of emotional design EXCEPT
   A. Reflective.
   B. Visceral.
   C. Social.
   D. Behavioral.

Continued...

Answer

6) Which of the following situation elicits negative responses from users? [ ]
   A. An application suddenly crashes.
   B. A beach ball whirling to say the computer is busy.
   C. The look and feel of a website is pleasing and pleasurable.
   D. A recycle bin expanding after a file is placed in it.

7) Which of the following is NOT a natural user interface? [ ]
   A. Speak to machines.
   B. Gesture at machines in the air.
   C. Press a button on the keyboard.
   D. Dance on mats that detect feet movements.

8) Which of the following is a user interface element of original WIMP? [ ]
   A. Icons.
   B. Wearable.
   C. Multimedia.
   D. Prototype.

9) Which of the following is an example of physical coordination used for co-located groups to collaborate more effectively? [ ]
   A. An automatic emotion analysis to measure the audience's emotion during a show.
   B. The arm and baton movements of a conductor coordinate the different players in an orchestra.
   C. When putting on a show, the performers will constantly monitor what each other is doing in order to coordinate their performance efficiently.
   D. Interactive books that help beginners to learn music notes.

10) Social mechanisms have evolved in face-to-face and remote contexts to facilitate ___. [ ]
   A. Awareness.
   B. Awareness and coordination.
   C. Coordination and conversation.
   D. Awareness, coordination and conversation.

Continued...

Section C: Answer all questions.

1) Your research group will be developing a new movie rental services that could be used anywhere. Produce FOUR tasks associated with this product that would best be supported by each of the interaction types: instructing, conversing, manipulating and exploring.

(2 marks)

Answer

2) Your company will be designing a new interactive kiosk system for a local museum. As an interaction designer, you are required to understand the product functionality and the constraints under which the product must operate. When establishing requirements, four aspects of the environment must be considered. Identify all environment aspects and construct one design question related to each aspect.

(4 marks)

Answer

Continued...

3) ABC Sdn Bhd requests your team to carry out an evaluation study on a new interactive table. The goal of the evaluation study is to find out how users use the new product in their homes. So, your team proposes to conduct a laboratory experiment. Assess the proposed evaluation method based on the following factors: reliability and ecological validity. Justify your reason for each factor.

(4 marks)

Answer

Section D: Answer all questions.

A group of Human-computer Interaction researchers from Multimedia University is planning to build Butterfly Identification, a mobile-based application (as shown in Figure 1), for the visitors of Kuala Lumpur Butterfly Park, to make the visitors' journey not only fun, but informative as well. They decided that the application should provide information about all the butterfly species that exists in the KL butterfly park as well as able to provide a navigation system for the users to help them explore the park facilities.

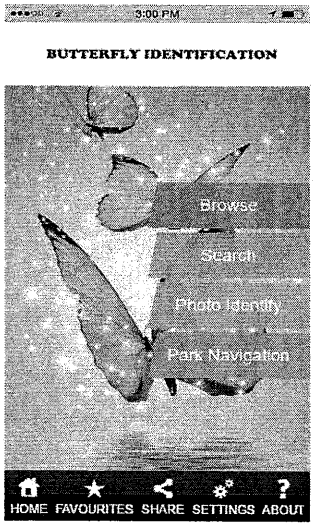

Figure 1. Butterfly Identification mobile app.

Continued...

Develop hand-drawn sketches to demonstrate the following statements:

1) The user is able to search the butterfly by location and color.

(2 marks)

Answer

2) The user is able to find information about the operation hours, ticket pricing and contact person.

(2 marks)

Answer

Continued...

3) The user is able to show list of favorite butterfly and set any butterfly as favorites.

(2 marks)

Answer

4) The user is able to set the application setting to a preferred language and text size (small, medium, large).

(2 marks)

Answer

Continued...

5) The user is able to share the image of butterfly species and location.

(2 marks)

Answer

End of page